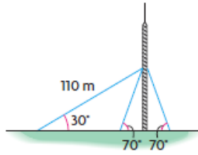


# Final Review Questions

6. A temporary support cable for a radio antenna is 110 m long and has an angle of elevation of  $30^\circ$ . Two other support cables are already attached, each at an angle of elevation of  $70^\circ$ . How long, to the nearest metre, is each of the shorter cables?



Nov 15-7:33 AM

Method #1

Method #2

$$\frac{\sin 110}{110} = \frac{\sin 30}{c}$$

$$\sin 110(c) = \sin 30(110)$$

$$0.9396c = 0.5000(110)$$

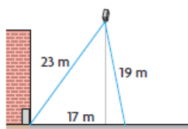
$$0.9396c = 55$$

$$c = 58.5m$$

The shorter cables are 59m long.

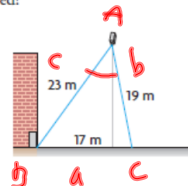
Apr 13-7:04 AM

8. A security camera needs to be placed so that both the far corner of a parking lot and an entry door are visible at the same time. The entry door is 23 m from the camera, while the far corner of the parking lot is 19 m from the camera. The far corner of the parking lot is 17 m from the entry door. What angle of view for the camera, to the nearest degree, is required?



Nov 15-7:34 AM

8. A security camera needs to be placed so that both the far corner of a parking lot and an entry door are visible at the same time. The entry door is 23 m from the camera, while the far corner of the parking lot is 19 m from the camera. The far corner of the parking lot is 17 m from the entry door. What angle of view for the camera, to the nearest degree, is required?



Nov 15-7:34 AM

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$17^2 = 23^2 + 19^2 - 2(23)(19) \cos A$$

$$289 = 529 + 361 - 874 \cos A$$

$$289 = 890 - 874 \cos A$$

$$-601 = -874 \cos A$$

$$\frac{-601}{-874} = \cos A$$

$$(0.6876) = \cos A$$

$$\cos^{-1}(0.6876) = A$$

$$47 = A$$

314-315  
Final Review  
Ch 5

Apr 13-9:57 AM

Q.1.  $\angle B = 180 - 124 - 37$   
 $\angle B = 119^\circ$

GO COOTS

$$\frac{\sin 119}{b} = \frac{\sin 37}{18}$$

$$\sin 119(18) = \sin 37(b)$$

$$0.8746(18) = 0.6018b$$

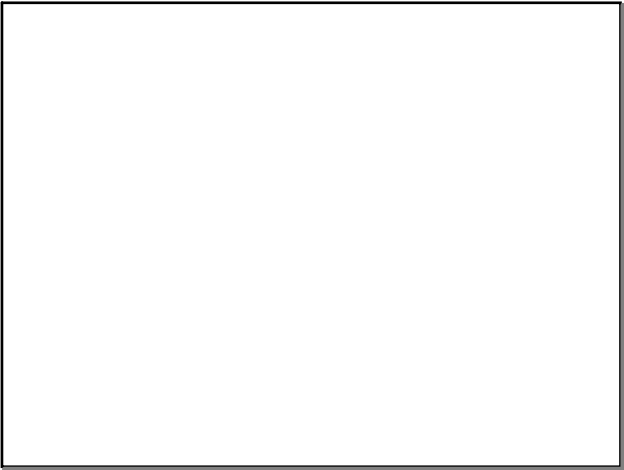
$$15.7428 = 0.6018b$$

$$b = 26.1'$$

math by Wilkie.

4 +

Nov 15-10:08 AM



Nov 15-10:28 AM